Katherine Vazquez

Final Five Annotations

[Sweller, John](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Sweller+John%22); [Clark, R.](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Clark+Richard+E.%22); [Kirschner, P.](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Kirschner+Paul+A.%22) (2010). Mathematical Ability Relies on Knowledge, Too.

*American Educator*, v34 p34-35.

Recent reform curricula both ignore the absence of supporting data and completely misunderstand the role of problem solving in cognition. If, the argument goes, teachers are not really teaching people mathematics but rather are teaching them some form of general problem solving, then mathematical content can be reduced in importance. According to this argument, educators can teach students how to solve problems in general, and that will make them good mathematicians able to discover novel solutions irrespective of the content. The authors believe this argument ignores all the empirical evidence about mathematics learning.

[Viadero, Debra](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Viadero+Debra%22). Study Gives Edge to 2 Math Programs. (2009). *Education Week*, v28 p1.

This article reports that two programs for teaching mathematics in the early grades--Math Expressions and Saxon Math--emerged as winners in early findings released last week from a large-scale federal experiment that pits four popular, and philosophically distinct, math curricula against one another. But the results don't promise to end the so-called “math wars" anytime soon, according to experts. That's because the two most successful programs embody different approaches to teaching math in grades K-2. The Saxon curriculum, published by Harcourt Achieve of Austin, Texas, is a more traditional, scripted program in which teachers offer explicit instruction on effective mathematics procedures. The Boston-based Houghton Mifflin Co.'s Math Expressions curriculum, in comparison, integrates a more reform-oriented emphasis on student reasoning with direct teaching that is aimed at moving students to more-advanced mathematical strategies. Involving 1,309 1st graders in 39 elementary schools, the four-state study is considered the largest experiment to test some of the nation's most widely used commercial math programs.

[Superfine, Alison Castro](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Superfine+Alison+Castro%22); [Kelso, C.](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Kelso+Catherine+Randall%22); [Beal, S](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Beal+Susan%22). (2010). Examining the Process of Developing a

Research-Based Mathematics Curriculum and Its Policy Implications. *Educational Policy*, v24 p908-934.

The implementation of "research-based" mathematics curricula is increasingly becoming a central element of mathematics education reform policies. Given the recent focus on grounding mathematics curriculum policies in research, it is important to understand precisely what it means for a curriculum to be research-based. Using the Curriculum Research Framework (CRF), this paper examines the development process of Math Trailblazers to help situate decision-making processes related to curricula in the broader mathematics education policy landscape. In the process of developing and revising the curriculum, the development and research teams have specifically developed field test materials, researched ways in which teachers and students use and learn with the materials in a small number of classrooms, and then completed research-based revisions of the curriculum materials. While certain elements of the CRF are represented in the research and revision process, other elements, such as why and under what conditions the curriculum is effective, are underrepresented.

[Lange, Pamela L.](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Lange+Pamela+L.%22) (2010). Teacher Perceptions and Student Achievement Related to Inquiry-

Based Mathematics. *ProQuest LLC, Ed.D*. Dissertation, University of South Dakota.

Mathematics curricula reform has been a continuous process in school systems throughout the United States for the past several decades. As school districts continue to face the challenges set forth in the No Child Left Behind Act, it is now more critical than ever before to measure the impact of curricula being utilized in today's schools. This study was informed by gender, grade level, and diverse learning needs of students regarding the implementation of inquiry-based versus traditional-based mathematics. Teachers' perceptions of student engagement, instructional strategies, professional development opportunities, and overall self-efficacy were also explored. A survey instrument collected data from 78 elementary classroom teachers, representing 29 school districts, who have been involved with a major grant-funded mathematics change initiative in the State of South Dakota. Overall, the teachers participating in this study reported that student engagement, instructional strategies, professional development opportunities, and overall self-efficacy all impact teaching in the mathematics classroom. Two main factors that support success in the mathematics classroom include math coaches, whether assigned by the district or the grant, and professional development opportunities. Student achievement data showed significance differences in mathematics performance in three areas: grade level, gender, and diverse learning needs. A significant interaction among the mathematics performance of the diverse learner and non-diverse learner plus inquiry-based and traditional-based curriculum was found.

[Kelley, Bridget](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Kelley+Bridget%22); [Hosp, J.](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Hosp+John+L.%22); [Howell, K.](http://www.eric.ed.gov/ERICWebPortal/search/simpleSearch.jsp?_pageLabel=ERICSearchResult&_urlType=action&newSearch=true&ERICExtSearch_SearchType_0=au&ERICExtSearch_SearchValue_0=%22Howell+Kenneth+W.%22) (2008). Curriculum-Based Evaluation and Math: An

Overview. *Assessment for Effective Intervention*, v33 p250-256.

Poor math performance is a major concern leading the current educational reform agenda. Many educational math critics are claiming a math crisis. Researchers and school personnel are trying to resolve this crisis. Some are looking at curriculum-based evaluation (CBE) as a process for solving this problem. CBE and curriculum-based measurement (CBM) are widely accepted validated tools for effectively yielding information necessary to make sound educational decisions. In this article, best practices in CBE and CBM are described as they pertain to math instruction. Specific steps of the CBE process are described as they pertain to math.